

Remarks

This is in response to the Office Action dated September 7, 2005.

Per the above amendment, claims 1-3 have been amended and new claims 4-6 added.

Claims 1-3 were rejected under 35 U.S.C. 102(b) as being anticipated by loucha et al (U.S. Patent No. 6,304,268).

A feature of the embodiment of the present invention is indicated hereafter. As shown in Fig. 7 and described in the specification, page 12, line 18 to page 13, line 9, the DRAM 14 has storage portions for storing data segments representative of MIP maps having different resolution levels LO, L1, L2, L3, ••• , and L14 for each block of an input two-dimensional image. Thus, the maximum number of the MIP maps is 15, and there are 15 storage portions in the DRAM 14 which correspond respectively to 15 different-resolution MIP maps for each block of the input two-dimensional image.

The specification, page 14, lines 19-28, reads as follows: "In the case where a two-dimensional image applied to a polygon or polygons has a resolution less than a specified value, the MIP map generator 15 produces only MIP maps with relatively low resolution levels and does not produce ones with relatively high resolution levels. The MIP map generator 15 notifies the polygon calculator 20 of the maximum among the resolution levels of produced MIP maps. In response to the maximum MIP-map resolution level, the polygon calculator 20 prevents the read-out of data from the storage locations in the synchronous DRAM 14 which are assigned to non-produced MIP maps, that is, MIP maps with relatively high resolution levels."

The foregoing underlined sentence highlights the feature of the embodiment of the present invention.

Claims 1, 2, and 3 have been amended to include the limitations corresponding to the feature of the embodiment of the present invention.

According to amended claims 1, 2, and 3, a number of generated MIP maps for each of the blocks of an input two-dimensional image is equal to or less than a predetermined maximum number, and a memory has storage portions assigned to the predetermined maximum number of different-resolution MIP maps respectively for each of the blocks. Data segments representative of the actually generated MIP maps are stored in assigned ones among the storage portions respectively for each of the blocks. Desired MIP map data is transferred from the memory while data read-out from the storage portions except the foregoing assigned ones (that is, the ones to which the actually generated MIP maps are assigned respectively) is prevented.

This underlined part highlights the feature of the apparatuses of amended claims 1, 2, and 3. This feature provides the following advantages. First, it is possible to simplify searching the memory for a desired MIP map. Second, it is possible to avoid the error of a wrong MIP map being read out from the memory and is then used in rendering the object.

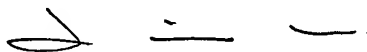
lourcha et al (U.S. Patent No. 6,304,268) disclose a texture memory 802 and a texture cache 804. The texture memory 802 stores the MIP map 100 having one representation or multiple representations of the texture at varying levels of resolution (column 9, lines 59-65). The texture cache 804 stores at least a portion of one level of the MIP map 100 which is sent from the texture memory 802 (column 10, lines 4-10).

Thus, lourcha et al do not teach the above-indicated feature of the apparatuses of amended claims 1, 2, and 2. That is, lourcha et al do not teach the prevention of data read-out from the storage portions except the foregoing assigned ones (i.e., the ones to which the actually generated MIP maps are assigned respectively) during the transfer of desired MIP map data from the memory.

In addition, the system in loucha et al can not yield the above-indicated advantages of search simplification and error avoidance provided by the apparatuses of amended claims 1, 2, and 3.

Accordingly, it is respectfully submitted that amended claims 1, 2, and 3 are not anticipated by, and in fact are patentable over, loucha et al. The examiner is therefore respectfully requested to reconsider the application and pass the same to issue at an early date.

Respectfully submitted,



Louis Woo, Reg. No. 31,730
Law Offices of Louis Woo
717 North Fayette Street
Alexandria, Virginia 22314
Phone: (703) 299-4090

Date: Nov 17, 2005